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Appendix 1

CLEAN FORMAL DRAWING SHEET
AMENDED FIGURE 7

Stall for Next to Last PipeStage (NLP)

$\text{Stall (NLP)} = \text{Valid Instruction in Pipe (NLP)} \text{ AND } (\text{ThreadId (NLP)} = \text{ThreadId of Stall})$

Stall for any other PipeStage X

$\text{Stall}(X) = \text{Valid Instruction in Pipe}(X) \text{ AND Valid Instruction in Pipe}(X+1) \text{ AND Stall (NLP)}$

Powerdown for any PipeStage X

$\text{Powerdown}(X) = \text{NOT Valid Instruction in Pipe}(X-1)$

Clock Enable for any PipeStage X

$\text{Clock}(X) = \text{NOT Stall}(X) \text{ AND NOT Powerdown}(X)$

Clear for any PipeStage X

$\text{Clear}(X) = \text{Clock}(X) \text{ AND } [(\text{ClearThread}(\text{Id0}) \text{ AND } (\text{ThreadId}(X-1) = \text{Id0})) \text{ OR } (\text{ClearThread}(\text{Id1}) \text{ AND } (\text{ThreadId}(X-1) = \text{Id1}))]$

OR

$\text{NOT Clock}(X) \text{ AND } [(\text{ClearThread}(\text{Id0}) \text{ AND } (\text{ThreadId}(X) = \text{Id0})) \text{ OR } (\text{ClearThread}(\text{Id1}) \text{ AND } (\text{ThreadId}(X) = \text{Id1}))]$

$\text{ClearThread}(\text{Id0}) = \text{There was a Clear on Thread Identification 0}$

$\text{ClearThread}(\text{Id1}) = \text{There was a Clear on Thread Identification 1}$

$\text{Pipe}(X) = \text{Any pipestage in the decode}$

$\text{Pipe}(X-1) = \text{Pipestage before Pipe}(X)$

$\text{Pipe}(X+1) = \text{Pipestage after Pipe}(X)$

FIG. 7